

On page 14, line 10, following the word "are", please delete "thos" and insert therefor

--those--.

On page 19, line 24, following the phrase "H-TTTCCTCTC-LysNH₂," please insert

--(SEQ ID NO: 3)--.

On page 21, line 14, following the phrase "PNA5," please insert --SEQ ID NO: 9--.

On page 21, line 15, following the phrase "PNA6," please insert --SEQ ID NO: 10--.

In the claims:

Please cancel claims 1-8 without prejudice to their presentation in a continuing patent application. Also, please cancel claims 11, 20 and 21, replace them with claims 23-24, respectively, and rewrite claims 12-14 as indicated below:

In the claim 12, line 1, please delete "claim 11" and insert therefor --claim 22--.

~~13.~~ ³ (amended) The nucleic acid mimic according to claim [11] ²² ~~22~~ wherein

said sterically bulky substituent has 3 or more non-hydrogen atoms and is -R', -OR', -SR',

-N(R')₂, -C(R')₃, -C(=X)(R'), -C(=X)(-Y-R') or S(=O)₁₋₂(-Y-R') wherein:

X is O, S or NH;

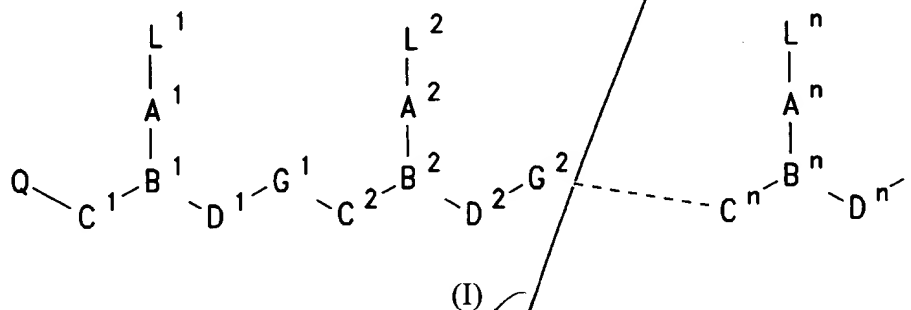
Y is O, S or NH; and

R' [comprises at least 3 atoms and] is H, C₁-C₅₀-alkyl, C₂-C₅₀-alkenyl, C₂-C₅₀-alkynyl, C₇-C₅₀-alkyl-aryl, C₆-C₅₀-aryl, C₁₀-C₅₀-naphthyl, C₁₂-C₅₀-biphenyl, C₇-C₅₀-aryl-alkyl,

pyridyl, imidazolyl, pyrimidinyl, pyridazinyl, quinolyl, acridinyl, pyrrolyl, furanyl, thienyl, isoxazolyl, oxazolyl, thiazolyl and biotinyl, wherein R' can be substituted one or more times by -NO, -NO₂, -SO₃⁻, -CN, -OH, -NH₂, -SH, -PO₃²⁻, -COOH, -F, -Cl, -Br and -I.

In the claim 14, line 1, please delete "claim 11" and insert therefor —claim 22--.

—22. The nucleic acid mimic according to claim 1 having formula (I):



wherein:

n is at least 2,

each of L¹-Lⁿ is independently selected from the group consisting of hydrogen, hydroxy, (C₁-C₄)alkanoyl, naturally occurring nucleobases, non-naturally occurring nucleobases, aromatic moieties, DNA intercalators, nucleobase-binding groups, heterocyclic moieties, and reporter ligands, at least one of L¹-Lⁿ being said base substituted with at least one sterically bulky substituent;

each of C¹-Cⁿ is (CR⁶R⁷), where R⁶ is hydrogen and R⁷ is selected from the group consisting of the side chains of naturally occurring alpha amino acids, or R⁶ and R⁷ are

40

wherein:

each L is independently selected from the group consisting of hydrogen, phenyl, heterocyclic base moieties, including those substituted with a sterically bulky group or groups, naturally occurring nucleobases, and non-naturally occurring nucleobases, at least one L being said base substituted with at least one sterically bulky substituent;

C3 cont
R³ and R⁴ independently are hydrogen, a conjugate, (C₁-C₄)alkyl, hydroxy- or alkoxy- or alkylthio-substituted (C₁-C₄)alkyl, hydroxy, alkoxy, alkylthio or amino;

each R⁷ is independently selected from the group consisting of hydrogen and the side chains of naturally occurring alpha amino acids;

n is an integer from 1 to 60;

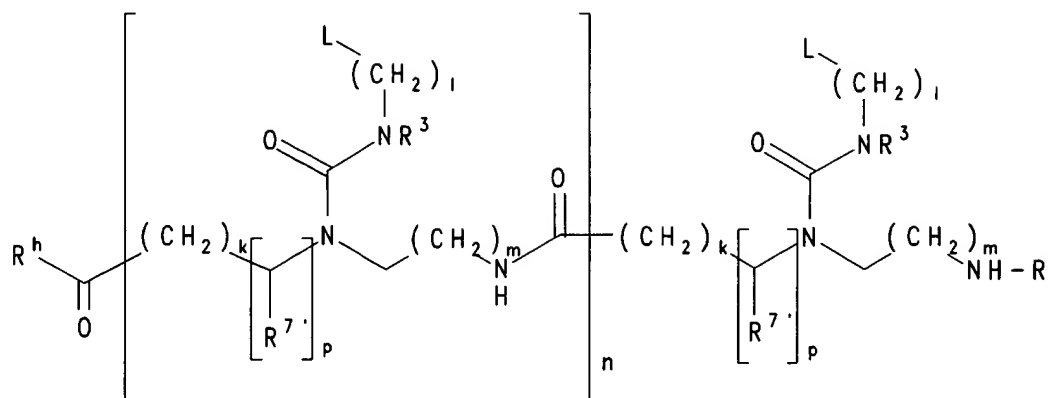
each of k, l, and m is independently zero or an integer from 1 to 5;

p is zero or 1;

R^h is OH, NH₂ or -NHLysNH₂; and

Rⁱ is H or COCH₃.

H
~~24.~~²⁴ The nucleic acid mimic according to claim ~~22~~²⁴ having formula (IIIb):



(IIIb)

wherein:

each L is independently selected from the group consisting of hydrogen, phenyl, heterocyclic base moieties, including those substituted with a sterically bulky group or groups, naturally occurring nucleobases, and non-naturally occurring nucleobases, at least one L being said base substituted with at least one sterically bulky substituent;

R³ and R⁴ independently are hydrogen, a conjugate, (C₁-C₄)alkyl, hydroxy- or alkoxy- or alkylthio-substituted (C₁-C₄)alkyl, hydroxy, alkoxy, alkylthio or amino;

each R⁷ is independently selected from the group consisting of hydrogen and the side chains of naturally occurring alpha amino acids;

n is an integer from 1 to 60;

each of k, l, and m is independently zero or an integer from 1 to 5;

p is zero or 1;

R^h is OH, NH₂ or -NHLysNH₂; and

Rⁱ is H or COCH₃--